

**Remarks**

Claims 2, 3, 6, 8 and 11-13 are pending herein. By this Amendment, claim 11 is amended to delete alkyl (meth)acrylate homopolymers from the list of materials which may constitute the core of core-shell polymer (A).

In the Office Action, claims 2, 3, 6, 8 and 11-13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent No. 62-285947 ("JP '947").

In view of the amendment and remarks herein, Applicants respectfully request reconsideration and withdrawal of the rejection set forth in the Office Action.

**I. The Rejection**

Claims 2, 3, 6, 8 and 11-13 are rejected under 35 U.S.C. §103(a) as being unpatentable over JP '947. The reference is cited for teaching a thermoplastic polyester composition comprising a thermoplastic component consisting of a thermoplastic polyester and an impact modifier, wherein the impact modifier consists of an epoxy group containing polymer that can be ethylene/unsaturated epoxide copolymer and a graft copolymer that can be polyacrylate core/methylmethacrylate shell graft copolymer. The reference is further cited for teaching that the epoxy group containing copolymer and the graft copolymer are each used in amounts of 1-80 parts per 100 parts of polyester. The examples in the reference are cited for showing combinations of epoxy group containing copolymer and core-shell copolymer in ratios of 90/10 to greater than 40/60. According to the Office Action:

As suggested by the reference, it would have been obvious to add a combination of an ethylene/unsaturated epoxide copolymer and a polyacrylate/methylmethacrylate core-shell copolymer in a ratio of 90/10 to greater than 40/60 to a thermoplastic polyester in order to obtain an impact modified thermoplastic polyester composition. Further, it would have been obvious to add a combination of an ethylene/unsaturated epoxide copolymer and a polyacrylate/methylmethacrylate core-shell copolymer in an amount of greater than 18% to a thermoplastic polyester in order to

obtain an impact modified thermoplastic polyester composition. The claims do not require any specific ratio of ethylene/unsaturated epoxide copolymer to core-shell copolymer when the impact modifier is used in amounts of greater than 18%.

According to the Office Action, JP '947 teaches that the graft copolymer therein can be a polyacrylate core/methylmethacrylate shell graft copolymer. Applicants are unable to determine whether the rubbery graft copolymers recited on pages 15-16 are core/shell copolymers or the contents of such copolymers. Therefore, Applicants' arguments herein are based on the assumption that the only core/shell copolymers disclosed in JP '947 are polyacrylate core/methylmethacrylate shell graft copolymers.

As noted above, claim 11 has been amended to exclude alkyl(meth)acrylate homopolymers from the list of materials which can serve as the core in the core-shell copolymer (A). Thus, amended claim 11 recites that the core consists of one or more polymers selected from the group consisting of isoprene homopolymers, butadiene homopolymers, copolymers of isoprene with at most 30 mol% of a vinyl monomer, copolymers of butadiene with at most 30 mol% of a vinyl monomer, and copolymers of alkyl (meth)acrylate with at most 30 mol% of a vinyl monomer, wherein the vinyl monomer in the core is selected from the group consisting of a styrene, an alkylstyrene and an alkyl (meth)acrylate.

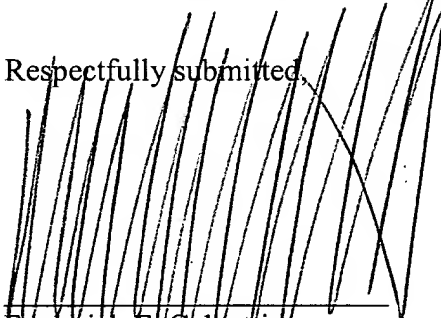
Applicants respectfully submit that JP '947 does not teach or suggest that the core of the core-shell copolymer therein may contain any of the materials recited in instant claim 11 as useful for the core of the core-shell copolymer (A). Thus, Applicants submit that JP '947 would not have made it obvious to use any of these materials as the core in core-shell copolymer (A).

Therefore, for at least the foregoing reason, Applicants respectfully submit that instant claims 2, 3, 6, 8 and 11-13 would not have been obvious over JP '947.

## **II. Conclusion**

In view of the amendment and remarks herein, Applicants respectfully request that the rejection of claims 2, 3, 6, 8 and 11-13 be withdrawn and that these claims be allowed.

Respectfully submitted,



Frederick F. Calvetti  
Reg. No. 28,557

Date: November 7, 2003

SMITH, GAMBRELL & RUSSELL, LLP  
1850 M Street, N.W.  
Suite 800  
Washington, D.C. 20036  
Telephone: (202) 263-4300  
Facsimile: (202) 263-4329

**LISTING OF CLAIMS**

Claim 1 (Cancelled)

Claim 2 (Previously Amended): Compositions according to Claim 11, wherein the polyester is selected from PET and PBT.

Claim 3 (Previously Amended): Compositions according to Claim 11, comprising up to 30 parts by weight of copolyetherester per 100 parts of thermoplastic polyester.

Claims 4-5 (Cancelled)

Claim 6 (Previously Amended): Compositions according to Claim 11, wherein the ethylene-unsaturated epoxide copolymers (B2) are ethylene-alkyl (meth)acrylate-unsaturated epoxide copolymers obtained by copolymerization of the monomers and contain from 0 to 40% by weight of alkyl (meth)acrylate and up to 10% by weight of unsaturated epoxide.

Claim 7 (Cancelled)

Claim 8 (Previously Amended): Compositions according to Claim 11, comprising, per 100 parts by weight, 75 to 95 parts of polyester for 25 to 5 parts of impact modifier, respectively.

Claims 9-10 (Cancelled)

Claim 11 (Currently Amended) A thermoplastic polyester composition not comprising polycarbonate, the composition comprising, by weight:

(i) a thermoplastic polyester;

(ii) an impact modifier comprising:

(a) a core-shell copolymer (A); wherein the core consists of one or more polymers selected from the group consisting of isoprene homopolymers, butadiene homopolymers, copolymers of isoprene with at most 30 mol% of a vinyl monomer, copolymers of butadiene with at most 30 mol% of a vinyl monomer, ~~alkyl (meth)acrylate homopolymers~~, and copolymers of alkyl (meth)acrylate with at most 30 mol% of a vinyl monomer, the vinyl monomer in the core being selected from the group consisting of a styrene, an alkylstyrene and an alkyl (meth)acrylate; further wherein the shell consists of one or more polymers selected from the group consisting of styrene homopolymers, alkylstyrene homopolymers, methyl methacrylate homopolymers, and copolymers consisting of at least 70 mol% of a styrene, alkyl styrene or methyl methacrylate with at most 30 mol% of a vinyl acetate;

(b) an ethylene copolymer (B) chosen from ethylene-unsaturated epoxide copolymers (B2) and blends thereof;

wherein the (B)/(A) ratio is between 90/10 and a value greater than 40/60 for proportions of impact modifier between 2 and 18% in 98 to 82% of polyester, respectively.

Claim 12 (Previously Added): A composition according to claim 11, wherein the composition consists of the thermoplastic polyester and the impact modifier.

Claim 13 (Previously Added): A composition according to claim 11, wherein the impact modifier consists of the core-shell polymer (A) and the ethylene copolymer (B).